WHAT IS CLAIMED IS:

1. An armature for an electromotive device, comprising:

a coil having inner and outer winding portions separated by an insulator, each of the winding portions comprising a plurality of sheet metal conductors; and

a commutator having a plurality of sheet metal commutator segments each being integrally formed with one of the conductors, the commutator having a smaller outside diameter than the outside diameter of the coil.

2. The armature of claim 1 wherein the commutator segments comprise at least first and second layers, the first layer of commutator segments and the conductors of the outer winding portion being formed from a first piece of sheet metal, and the second layer of commutator segments and the conductors of the inner winding portion being formed from a second piece of sheet metal.

3. The armature of claim 1 wherein each of the commutator segments comprises a width greater than the width of its corresponding conductor.

4. The armature of claim 1 wherein the number of the commutator segments is less than the number of conductors of the outer winding portion.

5. The armature of claim 1 further comprising a flywheel having a first portion supporting the coil and a second portion supporting the commutator, the first portion having a larger outside diameter than the outside diameter of the second portion.

6. The armature of claim 5 further comprising a shaft extending axially through the flywheel.

7. The armature of claim 1 wherein the insulator comprises a first non-conductive filament wrapped around the inner winding portion, the armature further comprising a second non-conductive filament wrapped around the outer winding portion

and polyimide encapsulating the commutator and coil, the first and second filaments being impregnated by polyimide.

8. An armature for an electromotive device, comprising:

a coil having inner and outer winding portions separated by an insulator, each of the winding portions comprising a plurality of sheet metal conductors; and

a commutator having a plurality of sheet metal commutator segments, each of the commutator segments being integrally formed with one of the conductors and having a width greater than the width of its corresponding conductor.

9. The armature of claim 8 wherein the commutator segments comprises at least first and second layers, the first layer of commutator segments and the conductors of the outer winding portion being formed from a first piece of sheet metal, and the second layer of commutator segments and the conductors of the inner winding portion being formed from a second piece of sheet metal.

10. The armature of claim 8 wherein the commutator has a smaller outside diameter than the outside diameter of the coil.

11. The armature of claim 10 further comprising a flywheel having a first portion supporting the commutator and a second portion supporting the coil, the first portion having a smaller outside diameter than the outside diameter of the second portion.

12. The armature of claim 12 further comprising a shaft extending axially through the flywheel.

13. The armature of claim 8 wherein the number of the commutator segments is less than the number of conductors of the outer winding portion.

14. The armature of claim 8 wherein the insulator comprises a first non-conductive filament wrapped around the inner winding portion, the armature further

comprising a second non-conductive filament wrapped around the outer winding portion and polyimide encapsulating the commutator and coil, the first and second filaments being impregnated by polyimide.

15. A method of fabricating an armature from a pair of conductive sheets, comprising:

forming in each of the conductive sheets a plurality of conductors each comprising first and second conductor portions;

shaping the conductive sheets into inner and outer cylinders;

positioning the inner cylindrical conductive sheet inside the outer cylindrical conductive sheet;

forming a coil from the first conductor portions of the inner and outer cylindrical conductive sheets; and

forming a commutator from the second conductor portions of the inner and outer cylindrical conductive sheets, the commutator having a smaller outside diameter than the outside diameter of the coil.

16. The method of claim 15 wherein the formation of the commutator comprises removing one or more of the second conductor portions from the armature.

17. The method of claim 16 wherein each of the remaining second conductor portions comprises a commutator segment having a width greater than the width of its corresponding first conductor portion.

18. The method of claim 15 further comprising inserting a flywheel into the armature, the flywheel having a first portion configured to support the coil and a second portion configured to support the commutator, the first portion having a larger outside diameter than the outside diameter of the second portion.

19. The method of claim 18 further comprising inserting a shaft through the flywheel.

20. The method of claim 17 further comprising wrapping the first conductor portions of the inner cylindrical conductive sheet with a non-conductive filament, wrapping the first conductor portions of the outer cylindrical conductive sheet with a non-conductive filament, and applying a polyimide to the armature to encapsulate the armature and impregnate the non-conductive filaments.

21. A method of fabricating an armature from a pair of conductive sheets, comprising:

forming in each of the conductive sheets a plurality of conductors each including first and second conductor portions,;

shaping the conductive sheets into inner and outer cylinders;

positioning the inner cylindrical conductive sheet inside the outer cylindrical conductive sheet;

forming a coil from the first conductive portions of the inner and outer cylindrical conductive sheets; and

forming a commutator from the second conductor portions of the inner and outer cylindrical conductive sheets, the commutator including a plurality of commutator segments each having a width greater than the width of its corresponding first conductor portion.

22. The method of claim 21 wherein the formation of the commutator comprises removing one or more of the second conductor portions from the armature.

23. The method of claim 21 wherein the outer diameter of the commutator is smaller than the outer diameter of the coil.

24. The method of claim 21 further comprising inserting a flywheel into the armature, the flywheel having a first portion configured to support the coil and a second portion configured to support the commutator, the first portion having a larger outside diameter than the outside diameter of the second portion.

25. The method of claim 24 further comprising inserting a shaft through the flywheel.

26. The method of claim 21 further comprising wrapping the first conductor portions of the inner cylindrical conductive sheet with a non-conductive filament, wrapping the first conductor portions of the outer cylindrical conductive sheet with a non-conductive filament, and applying a polyimide to the armature to encapsulate the armature and impregnate the non-conductive filaments.